Unit Circle Worksheet Name _____

Find the exact value of the following. Do not use a calculator.

1. $\sin \frac{2\pi}{3}$
2. $\cos \frac{7\pi}{6}$
3. $\tan 10\pi$
4. $\sec 30^\circ$
5. $\tan (-765^\circ)$
6. $\sin 180^\circ$
7. $\cot \frac{-5\pi}{3}$
8. $\cos 150^\circ$
9. $\sec \frac{9\pi}{4}$
10. $\cot (-90^\circ)$
11. $\csc (\frac{-\pi}{6})$
12. $\sin (-150^\circ)$
13. $\tan \frac{4\pi}{3}$
14. $\tan 480^\circ$
15. $\sin (\frac{-5\pi}{4})$
16. $\csc (-315^\circ)$
17. $\sec \frac{3\pi}{2}$
18. $\cot 330^\circ$
19. $\csc \frac{11\pi}{3}$
20. $\cos 0$
21. $\cos 49\pi$
22. $\csc (-270^\circ)$
23. $\cot \frac{21\pi}{2}$
24. $\sec (-120^\circ)$

Find all the values of θ, where $0^\circ \le \theta < 360^\circ$, that make each of the following true.

25. $\sin\theta = \frac{-\sqrt{3}}{2}$

26. $\sec\theta = \frac{-2\sqrt{3}}{3}$

27. $\tan\theta$ = undefined

28. $\csc\theta = \sqrt{2}$

29. $\cot\theta = -1$

30. $\cos\theta = \frac{\sqrt{3}}{2}$

31. $\sec\theta = 0$

32. $\cot\theta = \sqrt{3}$

33. $\sin\theta = \sin 15^\circ$

34. $\cos\theta = \cos 20^\circ$

35. $\tan\theta = \tan 100^\circ$

36. $\csc\theta = \frac{2\sqrt{3}}{3}$

Find all the values of θ, where $0 \le \theta < 2\pi$, that make each of the following true.

37. $\tan\theta = 1$

38. $\sin\theta = \frac{-1}{2}$

39. $\csc\theta = -1$

40. $\sec\theta = \sec\frac{\pi}{10}$

41. $\cot\theta$ = undefined

42. $\cos\theta = \frac{\sqrt{2}}{2}$

43. $\cos\theta = 1$

44. $\cot\theta = \frac{\sqrt{3}}{3}$

45. $\sec\theta = -\sqrt{2}$

46. $\sin\theta = -2$

47. $\tan\theta = 0$

48. $\csc\theta = 2$